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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (b)(2).


Docket Number		AF207/2003		Type a plus sign (+) inside this box →	+	
INVENTOR(s)/APPLICANT(s)						
LAST NAME	FIRST NAME	MIDDLE INITIAL	RESIDENCE (CITY AND EITHER STATE OR FOREIGN COUNTRY)			
Jordan	Elsie	A.	Temecula, CA			
Su	Wen-Chen		Lexington, KY			
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Dituro	Michael	A.	Huntington, WV			
TITLE OF THE INVENTION (256 characters max)						
CLEANING AND POLISHING WAX COMPOSITION						
CORRESPONDENCE ADDRESS						
David W. Carrithers, CARRITHERS LAW OFFICE, One Paragon Centre, 6060 Dutchman's Lane, Suite 140, Louisville						
STATE	KY	ZIP CODE	40205	COUNTRY	U.S.A.	
ENCLOSED APPLICATION PARTS (check all that apply)						
<input checked="" type="checkbox"/>	Specification	Number of Pages	15	<input type="checkbox"/>	Small Entity Statement	
<input type="checkbox"/>	Drawing(s)	Number of Sheets		<input checked="" type="checkbox"/>	Other (specify) Abstract	
METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)						
<input checked="" type="checkbox"/>	A check or money order is enclosed to cover the filing fees				FILING FEE AMOUNT (\$)	160.00
<input type="checkbox"/>	The Commissioner is hereby authorized to charge filing fees and credit Deposit Account Number: _____					

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

☒ No.☐ Yes, the name of the U.S. Government agency and the Government contract number are: _____

Respectfully submitted,

SIGNATURE



Date 12/04/03

TYPED or PRINTED NAME David W. Carrithers

REGISTRATION NO.
(if appropriate)

35,475

☒

Additional inventors are being named on separately numbered sheets attached hereto

USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

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In re Application of:)
Elsie A. Jordan et al.)
)
Filed: Simultaneously Herewith) Examiner:
) Group Art Unit:
Serial No:)
)
For: CLEANING AND POLISHING)
WAX COMPOSITION)
)
Atty. Docket No.: AF207/2003)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Filed: Simultaneously Herewith) Examiner:
Serial No:) Group Art Unit:
For: CLEANING AND POLISHING)
WAX COMPOSITION)
Atty. Docket No.: AF207/2003)

Mailstop PROVISIONAL
Commissioner for Patents
P.O. Box 1450
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U.S. PROVISIONAL PATENT APPLICATION TRANSMITTAL LETTER

Dear Sir:

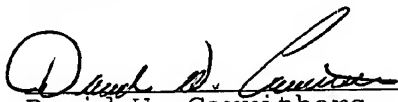
Enclosed herewith for filing are:

- 1) Provisional patent application including specification and claims;
- 2) Unexecuted Declaration and Power of Attorney;
- 3) Provisional Application Cover Sheet;
- 4) Abstract of the Invention;
- 5) Express mail certificate;
- 6) Check in the amount of \$160;
- 7) A return postcard showing receipt of the above items.

Please process this application.

Respectfully submitted,

Date 12/4/03


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

UTILITY PATENT APPLICATION

OF

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AND

FRANCES E. LOCKWOOD

FOR

CLEANING AND POLISHING WAX COMPOSITION

CLEANING AND POLISHING WAX COMPOSITION

Background of the Invention

Technical Field

5 This invention relates to a water in oil emulsion containing both natural and synthetic waxes together with a suspension agent(s), surfactant(s), and high purity aluminum oxide particles of 20 micrometers or less that cleans and provides a high gloss on automobile exterior surfaces and is applied to a clean surface.

Description of the Prior Art

10 There are numerous wax products available on the market to protect and polish the painted body surfaces of an automobile and also various different ways of applying the same. The most recommended procedure is to wash and dry the painted surface, apply
15 the protective finish to the clean dry surface, and then buff the surface. The applied wax remains as a protective finish throughout several subsequent washes but it is a time consuming labor intensive procedure.

20 A quick wax job is obtainable in an automatic or semiautomatic car-wash where a detergent is applied to the surface of the vehicle under high water pressure and/or using a water and detergent solution together with strips of absorbent material or sponges to remove the dirt. As part of the car-wash liquid wax may be sprayed onto the vehicle and allowed to drip dry or be dried using an air
25 blower. The wax compositions used by professional car washes that are applied while the automobile painted surface is wet are immediately subjected to a blow dry step and is not buffed. Neither of the latter two wax compositions and procedures of

applying the same provide long lasting satisfactory results.

Conventional commercial waxes and polishes typically contain a wax dispersed in water or dissolved in a solvent often together with abrasives for dry application to a painted surface of a automobile. The wax dries and is removed with hand or mechanical buffing machines requiring considerable labor and time.

Polishing compounds, especially those defined as cleaner waxes are generally formulated with abrasive materials such as aluminum oxide of larger than 0.20 micrometer particle size. When polishing a car's painted surface, the cleaner waxes remove contaminants; however, the application and removal of same typically leaves a clean but dull surface. At least a second step of waxing is required with a polishing compound which typically incorporates a high percentage of natural or synthetic waxes and a minimum amount or no abrasive material in order to achieve a coat of wax having a high gloss appearance.

SUMMARY OF THE INVENTION

A principal object of the present invention is to provide a cleaning and polishing wax composition which functions as a cleaner wax to remove dirt and particles of contamination and yet provides a high gloss finish in a single application.

Selected constituents comprising the formulation of Applicant's instant invention are added as emulsified components; however, the formulated product is a blend of components mixed together, and is not dependent upon use of an emulsifier in order to disperse all of the various components together in the final product as is taught by conventional waxes applied to a dry surface.

In keeping with this object there is provided in accordance

with the present invention a water in oil wax composition for use on vehicular exterior painted metal or painted plastic surface, chrome, stainless steel, plastic moldings, vinyl tops and trim, fiberglass, and/or rubber surfaces. The cleaning and polishing wax composition contains both natural and synthetic waxes together with a suspension agent(s), surfactant(s), and high purity aluminum oxide having a (nano) particle size of 20 micrometers or less that cleans and provides a high gloss on automobile exterior surfaces and is applied to a clean dry surface. The preferred aluminum oxide is agglomerate free and contains no magnesium oxide.

It is another object of the present invention to product a one step single application cleaning and polishing wax composition with the desired characteristics of emulsifiability, malleability, durability, and solidity at ambient temperature having a melting or softening point in the range of from about 80°C to about 86°C.

It is another object of the present to utilize a natural wax having a cationic charge.

These an other objects and features of the invention will become apparent to those skilled in the art from the following detailed description and appended claims.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The instant invention is particularly directed to reducing the effort of providing a glossy finish on the painted exterior surface of a vehicle such as an automobile or the like by combining the step of applying a cleaner wax and a polishing wax in a single application. The exterior surface of the automobile is washed in a conventional manner using appropriate conventional cleaning agents such as detergents in the water and the surface is then rinsed using clean water. The surface is dried after rinsing and before the wax is applied thereto.

One preferred embodiment of the instant invention comprises a wax composition utilizing a selected amount of blended components and solvent for providing a cleaning action to the vehicle surface and leaving a residue of wax which upon buffing yields a high gloss surface.

One preferred wax composition comprises a water in oil emulsion containing a cationic carnauba wax micro emulsion, a silicone oil emulsified, alkyl quaternary ammonium montmorillonite, polyglycerol ester of oleic acid, aliphatic hydrocarbons, synthetic isoparaffinic hydrocarbons, water, anhydrous aluminum silicate, and high purity aluminum oxide having a particle size of 20 micrometers or less.

More particularly, a preferred wax composition is composed of a water in oil emulsion having about 10 to 20 percent of soft or demineralized water; solvent in an amount of about 25 to 45 percent by weight; a cationic carnauba wax micro emulsion in an amount of about 10 to 20 percent by weight, an emulsified silicone oil comprising a blend of liquid dimethyl polysiloxanes in an amount of from about 8 to 15 percent by weight, an alkyl quaternary ammonium montmorillonite in an amount of from about 1 to 3 percent by weight, a polyglycerol ester of oleic acid in an amount of from about 1 to 2 percent by weight, an aliphatic hydrocarbon in an amount of about 25 to 40 percent by weight, a synthetic isoparaffinic hydrocarbons such as ISOPAR M or ISOPARE, an isoparaffinic solvent in an amount of from about 1 to 5 percent by weight, an anhydrous aluminum silicate in an amount of from about 1 to 5 percent by weight, and a high purity aluminum oxide in an amount of from about 1 to 3 percent by weight having a particle size of about 20 micrometers or less. One of more fragrances can be optionally added in an amount of from about 0.20 to 0.40 percent by weight. Also, it is recommended as an option to add a biocide such as DANTOGARD in an amount of about 0.12 percent by weight.

The resulting composition is a light brown liquid emulsion having solid contents of about 21 to 23 percent by weight. Application to a painted surface or other surface to be treated applied as a liquid or semi-solid paste results in an easy wiping and removal of excess product from the surface resulting in a glossy surface without streaks. A preferred method of application is applying with a sponge onto the dry surface whereby upon drying the surface is then buffed with a cloth, sponge, and/or other absorbent material to dry and simultaneously buff the same. The oil based composition provides a composition capable of cleaning and polishing in a single step.

The water in oil emulsion of the present invention forms at least two phases. The organic phase containing the wax product constitutes from about 80 to about 90% of the composition and the water phase constitutes the remaining portion of the composition of about 10% to about 20%. An emulsifier which may also be a surfactant stabilizes the emulsion preventing separation into separate phases. Both the aqueous phase and/or the solvent phase may include thickening agents, emulsifiers, surfactants, suspension agents, colorants, fragrances, and preservatives.

The water in oil emulsion of the present invention contain at least one emulsifier comprising an emulsifying agent of surfactants which is compatible in the predominantly aliphatic hydrocarbon mixture phase. A preferred emulsifier is polyglycerol ester of oleic acid. It is contemplated that other suitable emulsifiers may be selected from the group comprising sorbitan polyoxyethylene, sorbitan sesquioleate, sorbitan trioleate, and polyoxyethylene trioleate. The amount of emulsifier can vary. It is recommended that the least amount of emulsifier be used to provide an effective amount capable of maintaining a stable emulsion.

A long chain fatty alcohol provides a nonionic surfactant which includes cetyl, stearyl alcohol, ethoxylated fatty alcohol,

cetyl palmitate, cetyl myristate, polyethylene glycol stearate, glyceryl monostearate, monolactate, monooleates, tallow triglycerides and ethoxylated esters. Polyoxyethylene sorbitan monooleate, alkyl glucosinates, ethoxylated cetyl alcohol, ethoxylated stearyl alcohol, and polyoxyethylene nonylphenol represent suitable ethoxylated esters.

The concentration of the emulsifier is added in an amount of from about 1 to 2% by weight, and more preferably in an amount of from about 1 to about 1.5% by weight. The most preferred concentration is about 1.0 percent by weight.

The polish comprises a water in oil emulsion. The minor component being water and the major component is a combination of an aliphatic hydrocarbon solvent and a wax product including additives thereto. The ratio of water to the combination of solvent and wax product is in a ratio of about 1:4 to about a 1:9. Typically the water used in the formulation is soft or demineralized water.

Solvents useful in the formulation are predominately aliphatic hydrocarbon solvents. For instance, hydrocarbons containing up to 100 percent aliphatic hydrocarbons are most preferable and hydrocarbons containing less than 1 percent aromatic content are deemed very desirable. Also useful are solvents typically containing from about 10 to 90 percent aliphatic hydrocarbons and from about 0 to 10 percent aromatic hydrocarbons. Solvents deemed suitable which contain less than 10% aromatic hydrocarbons include odorless mineral spirits, Stoddard solvent, and mixed alkanes that have a flash point of about 40°C. The solvent concentration can vary from about 25% to about 45% by weight of the final formulation.

In addition to the aliphatic hydrocarbon, an organic solvent is added to the wax composition to aid in cleansing and aid in the

removal of residual water upon application of the product on a wetted surface. Organic solvents useful in the present invention include isoparaffins, aliphatic hydrogen solvents, paraffinic solvents, paraffins, synthetic isoparaffinic solvents. One preferred organic solvent is sold under the trade name of ISOPAR E which is a synthetically produced isoparaffinic solvent sold by ExxonMobil Chemical Company. It is contemplated that ISOPAR M would also exhibit acceptable performance as well. The isoparaffinic solvents are highly aliphatic compounds containing a high percentage of isoparaffins. The organic solvents used in the present invention are typically considered high boiling solvents having a low vapor pressure typically less than 1.0mm Hg at 20°C and preferably 0.1 mm Hg or less at 20°C. Furthermore, the most preferred ISOPAR solvents reportedly have a vapor pressure of about 10 mm Hg at 38°C and more preferably have a vapor pressure of about 4 mm Hg at 38°C. The high boiling solvent is added in an effective amount up to 25 percent by weight, more preferably in a range of from between 0.01 to 15.0 percent by weight, more preferably in a range of from 0.1 to 10.0 percent by weight, more preferably in a range of from between 1.0 to 8.0 percent by weight based on the total weight of the composition. One preferred embodiment of the present invention includes about 5.6 percent by weight of ISOPAR E based on the total weight of the composition blend.

The wax product can comprise a synthetic wax instead of, or in addition to, the natural waxes; however, the preferred embodiment utilizes both synthetic and natural waxes and more particularly a wax having a cationic charge whereby the wax provides a surface-active substance in which the active constituent is the positive ion. The combination of the wax or combination of waxes and the selected solvent in the final composition comprise at least 2.4% of the total composition. Preferably the combination of solvent and wax product comprises at least 47% of the weight of the total composition.

The preferred wax component is carnauba wax, more particularly a cationic carnauba wax micro emulsion. It is contemplated that alternate plant waxes such as candelilla, orange-peel, montan, and/or japan wax could be utilized in the present invention as alternate wax components, preferably in a cationic micro emulsion. It is contemplated that synthetic waxes such as polyethylene wax, polypropylene wax, polyamide wax, and combinations thereof can also be utilized in the instant invention.

The instant invention preferably utilizes at least one cationic natural wax such as carnauba wax. The wax is provided as a microemulsion, typically a cationic emulsion consisting of about 12 percent by weight wax. Of course the wax could be obtained dry and dispersed within the blend of components separately from the emulsion providing the same functional qualities; however, it is more convenient to obtain the wax in the form of a approximately 60% emulsion from commercial vendors. The wax emulsion consisting of about 12% wax is added to the wax composition blend in an effective amount to form a thin film on a wetted surface upon buffing, ranging from 0.001 to 6.0percent by weight, and more preferably in a range of from 0.01 to 1.0 percent by weight, and more preferably in a range of from between 0.01 and 0.1 percent by weight based on the total weight of the composition. One preferred embodiment uses 20 percent by weight of a 12% carnauba emulsion.

A wax comprising a silicone blend of liquid dimethyl polysiloxanes is used in the present invention to aid in spreading and enhance the gloss of the product upon application. The dimethyl polysiloxane is typically obtained commercially as a silicone oil which is added to the blend of other constituents and mixed together to form the final wax composition. Dimethyl polysiloxane from Dow Corning sold under the trademark 200 FLUID or from General Electric sold under the trademark SF96. An effective amount of the dimethyl polysiloxane or blend thereof comprises an

amount of up to 30% by weight and more preferably from 1% to 15% by weight can be used in the present invention and more particularly in a range of from 0.01% to about 10.0% by weight, more particularly in a range of from about 0.1 to about 8.0 percent by weight, and more particularly from about 1.0 to 5.0 percent by weight based on the total weight of the composition. One preferred embodiment uses an effective amount of dimethyl polysiloxane in an amount of about 13.5 percent by weight.

The wax composition of the present invention utilizes a thickening agent which may also aid in the suspension of particles in the emulsion. A preferred thickening agent is alkyl quaternary ammonium montmorillonite, a type of clay, in an amount of from 0.1 to 4 percent by weight and more preferably from about 1 to about 4 percent by weight. The alkyl quaternary ammonium montmorillonite functions as a dispersant or thixotrope commercially available as CLAYTONE AF thixotrope from E.C.C. America, Inc. and works particularly well with the cationic carnauba wax micro emulsion.

It is contemplated that other thickening agents such as guar gum hydroxymethylcellulose, polyethylene glycols, glucan xanthan, locust bean gum, clays, zeolites, fumed silica or silica gel could be added to the present composition as additives.

Anhydrous aluminum silicate is a polishing agent used in the instant composition. It is typically a clay which contains varying proportions of Al_2O_3 and SiO_2 which may contain crystals or whiskers up to 1cm long.

A particularly important constituent is the use of nano particles of high purity aluminum oxide having an average particle size of about 0.20 micrometers or less as measured using a Sedigraph 5100-MPD(D50) Sedigraph 5100 obtained from Micromeritics Instrument Corporation. The particles range in size up to 0.2

micrometers. The particles are defined as a high purity alumina grade RC-UFX MAR (no Magnesium oxide), and agglomerate free which was available from Reynolds Metals Company and later sold to Baikowski. Because most polishing compounds are generally formulated with aluminum oxide have particles sizes greater than 0.20 micrometers, polishing of a painted surface with same usually leaves a clean but dull surface requiring waxing with a high gloss wax to obtain a glossy surface. Because the instant invention utilizes aluminum oxide having nano particles, another abrasion is provided to clean the painted surface, yet the nanoparticles do not interfere with the waxes thereby leaving a high gloss wax surface produced in a one step by applying the wax and removing same by buffing.

A biocide, such as DANTOGARD (DMDM Hydantoin) or TROYSAN 395 is optionally used as a preservative in the product. The biocide is not a necessary component to provide a functional wax composition for use on wetted surfaces; however, the preservative provides a useful shelf life to the product. The biocide preservative is added in an effective amount to preserve the wax composition product and ranges from 0.01 to 2.0 percent by weight, and more preferably in a range of from 0.05 to 1.0 percent by weight, and more preferably in a range of from between 0.1 and 0.5 percent by weight based on the total weight of the composition. One preferred embodiment uses 0.12 percent by weight of a DANTOGARD in the wax composition. Other preservatives such as polymethoxybicyclic oxazolidine may also be useful in the present invention.

Although not required, an effective amount of one or more fragrances, such as vanilla, bubble gum, orange, limonene, fruity bouquet and the like may be added to the instant invention to impart a desirable scent to the product. Preferably the fragrance is present in an amount of up to 2 percent by weight, and more preferably of from between 0.001 to 1.0 percent by weight, and more

preferably of from between 0.01 to 0.5 percent by weight. One preferred embodiment contains about .04 percent by weight of fruity bouquet based on the total weight percent of the composition.

Although not required, an effective amount of one or more colorants composed of color additives that contain pigments with a particles size of less than about 0.5 microns in a concentration of less than 4%; however, the concentration will vary depending upon the intended application of the formulation.

Dyes, fungicides, and/or colorants may also be added to the wax composition in an effective amounts of less than 1 percent by weight based on the total weight of the composition.

Examples

The following tables provide formulations of cleaning and high gloss wax compositions in accordance with the present invention and provide examples of the range of ingredient percentages by weight providing an effective amount of the particular ingredients deemed necessary to obtain a cleaning wax yielding a high gloss finish in a single application.

One preferred formula for the wax composition of the present invention is set forth in Table I as follows:

Table I
(Water in Oil Emulsion)

	<u>Constituent</u>	<u>Commercial Name</u>	<u>Percent by Weight</u>
5	Cationic carnauba wax micro emulsion	TOMAH C-340	20.0
	Dimethyl polysiloxane		
	Alkyl quaternary ammonium montmorillonite	CLAYTONE AF	1.6
10	Polyglycerol Ester of Oleic Acid	WITCONOL 14	1.0
	Isoparaffinic solvent	ISOPAR E	5.0
	Aliphatic hydrocarbons	ODORLESS MINERAL SPIRITS	40.0
	Anhydrous Aluminum Silicate	KAOPOLITE TREATED	1.5
15	High Purity Aluminum Oxide (20 micrometer or less)	REYNOLDS RC-UFX MAR	2.5
	Biocide	DANTOGARD	0.1
	Fragrance	Fruity Bouquet	0.4

20 Another preferred composition contains an effective amount of
the following components:

Table II
(Water in Oil Emulsion)

	<u>Constituent</u>	<u>Commercial Name</u>	
5	Cationic carnauba wax micro emulsion (natural plant wax) (Carnauba Emulsion 60%)		
	Blend of Dimethyl polysiloxane G.E. SM 2163 60% (Synthetic wax)		
	Alkyl quaternary ammonium montmorillonite (thickener)		
	Polyglycerol Ester of Oleic Acid (surfactant/emulsifier)		
10	Synthetic Isoparaffinic Hydrocarbon	ISOPAR M	
	water (polar solvent)		
	Aliphatic hydrocarbons (hydrocarbon solvent)		
	Anhydrous Aluminum Silicate (polishing agent)		
15	High Purity Aluminum Oxide (20 micrometer or less)	(nanoparticle polishing agent)	
	Optional Ingredients:		
	Biocide	DANTOGARD	0.1
	Fragrance	Vanilla	0.15

The foregoing detailed description is given primarily for clearness of understanding and no unnecessary limitations are to be understood therefrom, for modification will become obvious to those skilled in the art upon reading this disclosure and may be made upon departing from the spirit of the invention and scope of the appended claims. Accordingly, this invention is not intended to be limited by the specific exemplifications presented herein above. Rather, what is intended to be covered is within the spirit and scope of the appended claims.

CLAIMS

We claim:

Claim 1. A water in oil emulsion forming a wax composition,
comprising an effective amount of :

5 an aliphatic hydrocarbon;

a cationic carnauba wax micro emulsion;

a silicone oil blend comprising a liquid dimethylpolysiloxane;

a alkyl quaternary ammonium montmorillonite;

an isoparaffinic solvent;

10 a polyalkylene oxide-modified polydimethylsiloxane block
copolymer product;

an anhydrous aluminum silicate;

an aluminum oxide having an average particle size of 20
micrometers or less; and

15 the remainder water;

ABSTRACT

CLEANING AND POLISHING WAX COMPOSITION

5 A water in oil emulsion wax composition composed of natural and synthetic waxes, surfactants, suspending agents, and aluminum oxide particles of high purity of 0.20 micrometer or less containing no magnesium oxide and being agglomerate free together with a aliphatic hydrocarbon solvent producing a wax having cleaning properties and an enhanced high gloss surface from a single application.

**DECLARATION AND POWER OF ATTORNEY
FOR PATENT APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **CLEANING AND POLISHING WAX COMPOSITION**, described and claimed in the specification which:

(check one) x is attached hereto.

Serial No. was filed on as Application
 and was amended on (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

Priority Claimed

<u>NONE</u>				
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No

I hereby claim the benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below:

_____	_____
(Application Number)	(Filing Date)
_____	_____
(Application Number)	(Filing Date)

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

<u>NONE</u>		
(Appln. Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)
_____	_____	_____
(Appln. Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements

were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

And I hereby appoint David W. Carrithers, Reg. No. 35,475 as my attorney, to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected therewith, and I request that all communications concerning this application be addressed to:

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Full name of third joint inventor: Hida Hasinovic
Inventor's signature: _____ Date: _____
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Inventor's signature: _____ Date: _____
Residence: 4386 Green Valley Road, Huntington, WV 25701
Citizenship: United States
Post Office Address: Same

Full name of fifth joint inventor: Frances E. Lockwood
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Citizenship: United States
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